

ERGONOMICS RISK ANALYSIS

Employee Information:

 Employee Number: _____ Name: Ronneil Estrallado Date: 2/04/03

 L-code: _____ Building: 222 Room: Hallway Email: _____

Division: _____ Group: _____ Job Title: _____

 Job Description: Sat Sampling
Evaluator:

 Name: Cheryl Bennett L-Code: L-438 Email: bennett13@llnl.gov
Supervisor:

Name: _____ L-Code: _____ Email: _____

Awkward Postures

Neck	<input type="checkbox"/> No Problem Observed <input checked="" type="checkbox"/> Twisted (rotated) <input checked="" type="checkbox"/> Tilted Back <input checked="" type="checkbox"/> Tilted Forward <input checked="" type="checkbox"/> Lateral (bending side to side) <input type="checkbox"/> Other	Specific Job Tasks: Looking overhead twisting to see behind objects	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Wrist	<input type="checkbox"/> No Problem Observed or Reported <input checked="" type="checkbox"/> Flexion <input checked="" type="checkbox"/> Ulnar Deviation <input checked="" type="checkbox"/> Extension <input checked="" type="checkbox"/> Radial Deviation <input type="checkbox"/> Other	Specific Job Tasks: Handling swipes wiping with cloth holding meter using broom sweep	Solutions: See above; Investigate alternative ways of supporting meter
Elbows/Forearm	<input type="checkbox"/> No Problem Observed or Reported <input checked="" type="checkbox"/> Flexed (arm bent up) <input checked="" type="checkbox"/> Extended (arm straight) <input checked="" type="checkbox"/> Winged (away from body) <input checked="" type="checkbox"/> Supination (palm up) <input checked="" type="checkbox"/> Pronation (palm down) <input checked="" type="checkbox"/> Sustained extension/flexion <input type="checkbox"/> Other	Specific Job Tasks: Handling swipes or cloth, Climbing ladder using vroom for rad swipes	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber); Investigate alternative ways of supporting meter
Back	<input type="checkbox"/> No Problem Observed or Reported <input type="checkbox"/> Slouched <input type="checkbox"/> Inadequate Lumbar Support <input checked="" type="checkbox"/> Twisted <input checked="" type="checkbox"/> Other - hyper extended, forward,	Specific Job Tasks: Taking swipes twisting to reach broom swipe on walls reaching, bending and twisting for floor swipes;	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber); ladder with platform may assist in reducing load on back
Shoulders	<input type="checkbox"/> No Problem Observed or Reported <input checked="" type="checkbox"/> Forward Reach <input checked="" type="checkbox"/> Reaching Behind <input checked="" type="checkbox"/> Raised/above shoulder height <input checked="" type="checkbox"/> Other –	Specific Job Tasks: Overhead swipes Reaching side and overhead, around objects	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Legs	<input type="checkbox"/> Insufficient leg clearance <input checked="" type="checkbox"/> Stance <input checked="" type="checkbox"/> Other – Stabilizing on ladder	Specific Job Tasks: Working on ladder, squatting for floor swipes	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber) and ladders with platform to provide more stability

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Other	<input checked="" type="checkbox"/> Work surface height	Specific Job Tasks:	Solutions: Investigate devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
Repetitive Activities (quantify)	Swipes of overhead pipes using broom for radiation swipes	Specific Job Tasks: Taking swipes overhead, on walls and floor	Solutions: Consider Pre-work warm-up and periodic stretching program
Static Postures (quantify)	Holding meter over surface of floor or wall, Carrying meter, taking swipes	Specific Job Tasks: Holding tasks	Solutions: Warm-up/stretching may help
Contact Stress/Pressure (quantify)	Monitor must be held above surface to avoid contact with trying surface.	Specific Job Tasks:	Solutions: Warm-up/stretching may help; Education to avoid excess tension or squeezing
Work Style/Flow	Routine includes alternating between deskwork, talking swipes throughout the day	Specific Job Tasks:	Solutions: In contaminated areas where suited up- Investigate ways to make it easier to take mini-breaks.
Environment (Organization, access, layout, hazards, lighting, temperature)	Lighting airborne particles wearing respirator, Tyvek suits, hard hats, gloves. Low temperature. Full faced power pack respirator.	Specific Job Tasks: Taking swipes	Solutions: Bump cap rather than a hard hat (already ordered).
Vibration (Quantify)	Jack hammer, Glove boxes	Demolition	Need to observe operation to make suggestions
Force (Quantify)		Specific Job Tasks:	Solutions: Could investigate forces needed and used.
Tools & Equipment	Radiation meters, Swipe sample bottles, Radiation wipes, Brooms, Ladders	Specific Job Tasks:	Solutions: Investigate telescoping handles to avoid having a longer handle than necessary on brooms and ladders with platform for more stability
Other	Balance: Must stabilize ladder while reaching.	Specific Job Tasks:	Solutions: Investigate ladders with platform for more stability

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Summary:

1. Equipment solutions include:

- Investigating telescoping handles to avoid having a longer handle than necessary on brooms
- Investigating devices that might allow taking swipes from a more neutral position (e.g. long handled grabber)
- Ladders with platform for more stability

2. Educational solutions include:

- Basic ergonomic principles as applied to these job tasks
- Body mechanics
- A pre-work warm-up and periodic stretching program
- Education to avoid excess tension in work activities

3. Areas for further observation and analysis include:

- Demolition jobs
- Force requirements of jobs and ways to reduce required forces